

truth of the most doubtful principle which he has assumed has thus been established by direct experiment."

Though they saw clearly the proofs which the rocks afford us of former revolutions, neither Hutton nor his friends had any conception of the existence of the great series of fossiliferous formations which has since been unfolded by the labours of later observers—that voluminous record in which the history of life upon this planet has been preserved. They spoke of "Alpine schistus," "primary" or "secondary" strata, as if the geological past had consisted but of two great ages—the second replete with traces of the destruction of the first. "The ruins of an older world," said Hutton, "are visible in the present structure of our planet." He knew nothing of the long, but then undiscovered, succession of such "ruins," each marking a wide interval of time. Nevertheless for the establishment of the great truths which Hutton laboured to confirm, such knowledge was not necessary. On the other hand, it was most needful that the significance of that discordance between the older and newer strata which Hutton recognised should be persistently proclaimed. And the Huttonians, in spite of their limited range of knowledge and opportunity, saw its value, and held by it.

2. But it was not merely, nor even perhaps chiefly, for their exposition of the structure and history of the rocks under our feet that the geologists of the Scottish School deserve to be held in lasting remembrance. They could not, indeed, have advanced as far as they did in expounding former conditions of the planet, had they not, with singular clearness, perceived the order and system of change which is in progress over the surface of the globe at the present day. It was their teaching which led men to recognise the harmony and co-operation of the forces of